

Technical Letter  
No. 1110-3-487

1 March 1998

Engineering and Design  
USE OF PETROLEUM CONTAMINATED SOIL  
IN COLD-MIX ASPHALT STABILIZED BASE COURSE

1. Purpose. This letter provides information and guidance for design and construction of mixtures using petroleum contaminated soil and similar hydrocarbon waste for cold-mix asphalt stabilized base course (ASB) construction.

2. Applicability. This letter is applicable to all HQUSACE elements and USACE commands having military construction and design responsibility.

3. References. See Appendix A.

4. Distribution. Approved for public release; distribution is unlimited.

5. Background.

a. It is estimated that 25 percent of all underground petroleum storage tanks over 20 years old have some leakage into the surrounding soil. This leakage generally results in approximately 23 to 38 m<sup>3</sup> (30 to 50 yd<sup>3</sup>) of contaminated soil for each leaking storage tank. However; contaminated soil amounts exceeding 7,650 m<sup>3</sup> (10,000 yd<sup>3</sup>) have been encountered on military installations. The U.S. Army Engineer Waterways Experiment Station (WES) has conducted research and participated in contaminated material disposal projects.

b. This ETL provides guidance and design recommendations for the use of petroleum contaminated soil in pavement construction. The information provided is for cold-mix applications of these materials in base course construction. Use of contaminated soils in hot-mix asphalt pavement applications has been accomplished, but discussion of this process is beyond the scope of this letter. ASB should only be utilized when laboratory analysis has shown that the process will result in a material that will meet existing state and federal requirements for leachate. A substantial amount of regulatory support is required to comply with all regulations.

6. Action. The enclosed guidance and design recommendations should be used by the Army for the design and construction of pavements using contaminated soils.

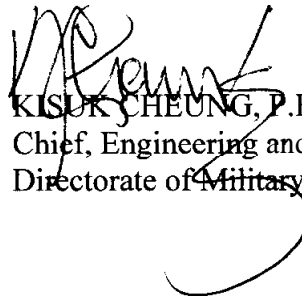
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7. Implementation. This letter will have routine application for all future military projects as defined in paragraph 8c, ER 1110-345-100.

FOR THE COMMANDER:

2 Appendixes



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